

WHAT IS CLAIMED IS:

1. An image ratio measuring method in an image forming apparatus for executing image formation by depositing a coloring material on a print medium
5 based on image data, the method comprising:
 an input step of entering image data;
 a conversion step of converting the entered image data into image data having a linear relationship with the image density; and
10 a calculation step of calculating an image ratio, based on the number of pixels in which said coloring material is deposited onto said print medium based on the image data converted in said conversion step, the number of pixels corresponding
15 to the size of said print medium, and the number of gradation levels per pixel.
2. A method according to claim 1, wherein said conversion step executes conversion to image data
20 normalized with the density scale in the pixel unit.
3. A method according to claim 1, wherein said calculation step calculates said image ratio by dividing the number of pixels of deposition to said print medium by a value obtained by multiplying the
25 total number of pixels corresponding to the size of said print medium with said number of gradation

levels.

4. A method according to claim 1, further
comprising a second calculation step of calculating
5 the consumption amount of the coloring material
consumed in the image formation, based on said
image ratio.

5. A method according to claim 4, wherein said
10 calculation step calculates the consumption amount
of the coloring material by multiplying the
consumption amount of the coloring material in a
unit area in a solid image formation, said image
ratio and the size of the recording sheet.

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6. A method according to claim 1, wherein said
input step enters image data matching the
characteristics of said image forming apparatus,
and the method further comprises an image forming
20 step of executing image formation based on the
image data matching the characteristics of said
image forming apparatus.

7. A method according to claim 4, further
25 comprising:

an accumulation step of accumulating the
consumption amount of said coloring material;

a detection step of detecting the remaining amount of said coloring material, from the accumulated value accumulated in said accumulation step and an initial amount of said coloring

5 material;

a discrimination step of discriminating whether an instructed image formation can be executed with the remaining amount detected in said detection step; and

10 a warning step of warning in case said discrimination step identifies that the execution is not possible.

8. An image forming apparatus comprising:

15 input means for entering image data;

conversion means for converting the entered image data into image data having a linear relationship with the image density; and

calculation means for calculating an image ratio,
20 based on the number of pixels in which said coloring material is deposited onto said print medium based on the image data converted in said conversion means, the number of pixels corresponding to the size of said print medium, and
25 the number of gradation levels per pixel.

9. An apparatus according to claim 8, wherein

said conversion means executes conversion to image data normalized with the density scale in the pixel unit.

- 5 10. An apparatus according to claim 9, wherein said calculation means calculates said image ratio by dividing the number of pixels of deposition to said print medium by a value obtained by multiplying the total number of pixels
10 corresponding to the size of said print medium with said number of gradation levels.

- 15 11. An apparatus according to claim 8, further comprising a second calculation means for calculating the consumption amount of the coloring material consumed in the image formation, based on said image ratio.

- 20 12. An apparatus according to claim 11, wherein said calculation means calculates the consumption amount of the coloring material by multiplying the consumption amount of the coloring material in a unit area in a solid image formation, said image ratio and the size of the recording sheet.

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13. An apparatus according to claim 8, wherein said input means enters image data matching the

characteristics of said apparatus, and the apparatus further comprises image forming means for executing image formation based on the image data matching the characteristics of said apparatus.

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14. An apparatus according to claim 11, further comprising:

accumulation means for accumulating the consumption amount of said coloring material;

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detection means for detecting the remaining amount of said coloring material, from the accumulated value accumulated in said accumulation means and an initial amount of said coloring material;

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discrimination means for discriminating whether an instructed image formation can be executed with the remaining amount detected in said detection means; and

warning means for warning in case said
20 discrimination means identifies that the execution is not possible.

15. An image forming system provided with an image data supplying apparatus, an image processing
25 apparatus for applying a predetermined process to said image data, and an image forming apparatus for executing image formation based on said processed

image data, comprising:

conversion means for converting the image data from said supplying apparatus to image data having a linear relationship with the image density;

- 5 first calculation means for calculating an image ratio based on the number of pixels in which said coloring material is deposited onto said print medium based on the image data converted in said conversion means, the number of pixels
- 10 corresponding to the size of said print medium, and the number of gradation levels per pixel; and
- second calculation means for calculating the consumption amount of said coloring material based on the image ratio calculated by said first
- 15 calculation means.